Specification

Color CRT Mask Frame, a Steel Sheet Used Therefor and a Manufacturing Method for the Steel Sheet, and a Color CRT Equipped with the Frame

THIS APPLICATION IS DIV OF 09/485131 WHICH IS CONT OF PCT/JP01/01602 3/2/01

Technical Field

This invention belongs to the technical field of color CRT's (color cathode ray tubes) (also referred to as color picture tubes) used in television receivers, displays, and the like. More specifically, this invention relates to a mask frame, a steel sheet used in manufacturing the mask frame and a manufacturing method therefor. The mask frame is a member which supports under tension a tension-type shadow mask which is disposed within a color CRT (in this specification referred to as a color CRT mask frame).

Background Art

A color CRT has in its interior three electron guns for red, blue, and green and a fluorescent screen (screen) impacted by electron beams discharged therefrom. The surface of the fluorescent screen has fluorescent dots formed thereon which generate the above-mentioned three colors and which are arranged in a regular sequence.

In the type of shadow mask type used in the majority of color CRT's, a rectangular shadow mask having a large number of aligned beam passage holes is disposed just in front of the fluorescent screen. The shadow mask is a member for performing alignment of the electron beams and the fluorescent dots so that each electron beam irradiates the fluorescent dots of the corresponding color.

A conventional ordinary shadow mask is made of a cold rolled steel sheet having a thickness of 0.15 - 0.28 mm in which fine holes with a regular spacing